

AMENDMENTS TO THE CLAIMS

- 1                   1.     (Currently Amended) An apparatus for  
2     monitoring the movement of a patient's spine  
3     comprising:  
4                    an elongated ~~a vertical~~ member disposed  
5                    longitudinally adjacent to the patient's spine and  
6                    adapted to be flexible in the midsagittal plane and  
7                    substantially inflexible in the frontal plane;  
8                    a first sensor mounted to the elongated  
9     ~~vertical~~ member and disposed to monitor flexion and  
10    extension motion of the patient's spine in the  
11    midsagittal plane; and  
12                    a second sensor mounted to the elongated  
13    ~~vertical~~ member and disposed to monitor lateral motion  
14    of the patient's spine in the frontal plane.
- 1                   2.     (New) The apparatus of claim 1 wherein the  
2     first sensor includes at least one strain gage.
- 1                   3.     (New) The apparatus of claim 2 wherein the  
2     second sensor is an optical sensor.
- 1                   4.     (New) The apparatus of claim 1 wherein the  
2     second sensor is an optical sensor.
- 1                   5.     (New) The apparatus of claim 4 wherein the  
2     second sensor is an optical mouse type sensor.

1           6.     (New) The apparatus of claim 4 further  
2     comprising a computer in electrical communication with the  
3     second sensor, wherein the computer includes a display  
4     having a cursor, wherein the second sensor controls movement  
5     of the cursor, and further wherein the computer detects the  
6     position of the cursor to show lateral movement of the  
7     patient's spine on the display.

1           7.     (New) The apparatus of claim 1 wherein the  
2     elongated member is a blade shaped member having a width in  
3     the frontal plane and a thickness in the midsagittal plane,  
4     wherein the width is greater than the thickness.

1           8.     (New) The apparatus of claim 1 wherein the  
2     elongated member has a first end and a second end opposite  
3     the first end, and further wherein the first sensor is  
4     mounted to the elongated member near the first end and the  
5     second sensor is mounted to the elongated member near the  
6     second end.

1           9.     (New) The apparatus of claim 1 wherein the  
2     first sensor is disposed along the patient's spine at  
3     approximately the location of the 1st sacral vertebrae.

1           10.    (New) The apparatus of claim 9 wherein the  
2     second sensor is disposed along the patient's spine at  
3     approximately the location of the 12th thoracic vertebrae.

1           11.    (New) The apparatus of claim 1 further  
2     comprising a corset wearable by the patient and having a

3 pocket, wherein the elongated member is substantially  
4 disposed inside of the pocket.

1 12. (New) The apparatus of claim 11 wherein the  
2 second sensor is disposed inside of the pocket.

1 13. (New) The apparatus of claim 12 wherein the  
2 corset includes a track disposed inside of the pocket, and  
3 further wherein the second sensor is an optical sensor  
4 disposed to detect movement of the track as the patient's  
5 spine moves laterally in the frontal plane.

1 14. (New) The apparatus of claim 1 wherein the  
2 second sensor remains substantially stationary in the  
3 frontal plane during lateral motion of the patient's spine  
4 in the frontal plane.

1 15. (New) An apparatus for monitoring the  
2 movement of a patient's spine comprising:  
3 an elongated member disposed longitudinally  
4 along the patient's spine;  
5 a first sensor mounted to the elongated  
6 member and disposed to monitor flexion and extension  
7 motion of the patient's spine in the midsagittal plane,  
8 wherein the first sensor includes at least one strain  
9 gage; and  
10 a second sensor mounted to the elongated  
11 member and disposed to monitor lateral motion of the  
12 patient's spine in the frontal plane.

1           16. (New) The apparatus of claim 15 wherein the  
2 first sensor is disposed along the patient's spine at  
3 approximately the location of the 1st sacral vertebrae.

1           17. (New) An apparatus for monitoring the  
2 movement of a patient's spine comprising:  
3           an elongated member disposed longitudinally  
4 along the patient's spine;  
5           a first sensor mounted to the elongated  
6 member and disposed to monitor flexion and extension  
7 motion of the patient's spine in the midsagittal plane;  
8 and

9           a second sensor mounted to the elongated  
10 member and disposed to monitor lateral motion of the  
11 patient's spine in the frontal plane, wherein the  
12 second sensor is an optical sensor

1           18. (New) The apparatus of claim 17 wherein the  
2 second sensor is an optical mouse type sensor.

1           19. (New) The apparatus of claim 17 further  
2 comprising a computer in electrical communication with the  
3 second sensor, wherein the computer includes a display  
4 having a cursor, wherein the second sensor controls movement  
5 of the cursor, and further wherein the computer detects the  
6 position of the cursor to show lateral movement of the  
7 patient's spine on the display.

1           20. (New) The apparatus of claim 17 further  
2 comprising a corset wearable by the patient, wherein the

3 corset includes a pocket and a track disposed inside of the  
4 pocket, and further wherein the second sensor is disposed  
5 inside of the pocket to detect movement of the track as the  
6 patient's spine moves laterally in the frontal plane.